II. INFORMATION DISCLOSURE STATEMENT

As discussed in detail in the Reply filed with the Request for Continued Examination on August 9, 2002, Applicant filed an Information Disclosure Statement with PTO-Form 1449 on February 18, 2000, a copy of which was included with Applicant's April 4, 2002, Request for Reconsideration. Applicant respectfully requests the Examiner to consider the references filed on February 18, 2000, and to initial and return to the undersigned the PTO-Form 1449.

III. REJECTION UNDER 35 U.S.C. §103(a)

The Examiner continues to reject claims 16-40 under 35 U.S.C. §103(a) over WO 97/49378 (Terranova). The Examiner also rejects claims 16-40 under 35 U.S.C. § 103(a) over Terranova in view of U.S. Patent No. 3,884,627 to Brody et al. ("Brody"). Applicant traverses the rejections for the reasons already of record as they apply to Terranova as well as those reasons presented below.

A. Terranova

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify reference teachings. Moreover, there must be a reasonable expectation of success in making the proposed modification. M.P.E.P. § 2143 (8th ed. 2001). In the present case, the Examiner has failed to show any suggestion or motivation to modify Terranova with a reasonable expectation of success. As a result, no *prima facie* case of obviousness has been made.

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Terranova teaches an oxidation dye composition comprising at least one specific class of pyrazolo[1,5-a]pyrimidine derivatives as an oxidation base. (Abstract.[1]) Terranova further teaches that its composition can optionally also contain at least one additional oxidation base, chosen from a long laundry list of oxidation bases, such as, for example, N,N'-bis(β-hydroxyethyl)-para-phenylenediamine. (Col. 6, lines 13-58.) Moreover, Terranova teaches that his composition may also optionally contain at least one coupler, such as m-aminophenol and m-phenylenediamine, chosen from a list as set forth at column 7, lines 8-18. The Examiner has relied on these general teachings to support her position that it would have been obvious to add the claimed "second oxidation base to Terranova's exemplified compositions and processes . . ., resulting in compositions and processes as claimed, because the patentee teaches that this claimed additional oxidation base may be added to the patentee's compositions, and that it is known and conventional in the hair dyeing art to mix different oxidation bases and couplers in order to obtain a wide variety of colors." (Office Action dated December 7, 2000, at 3-4, and Office Action dated July 12, 2001, at 4.)

Applicant respectfully submits that because many oxidation bases and couplers are already known, and because it takes time to determine which are safe for use, an invention in the oxidation dye art may often involve, as recognized by the Examiner, combinations of known oxidation bases and couplers in order to achieve a certain new color or shade of color or an improved property of an oxidation dye composition. For example, a combination of an oxidation base and coupler may be selected to improve

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[1] Because WO 97/49378 is in French, all references in this response refer to U.S. Patent No. 6,093,593, which is believed to be an English-language equivalent of the WO reference.

stability, rheological properties, diffusion of the dye into the hair, rinseability, inclusion of effective conditioning agents, viscosity, or rapid dyeing effect. Moreover, to be marketable, an oxidation dye composition must meet certain consumer requirements, such as, *inter alia*, resistance of the coloration to external factors such as light, washing, permanent waving, perspiration or rubbing. *See* Terranova at column 1, lines 60-66; present specification at page 2, lines 4-10.

Thus, because the formulation of an oxidation dye requires consideration of so many different criteria, one of ordinary skill in the art would need more than the general guidance of Terranova, *i.e.,* that additional bases and couplers can optionally be added, to be motivated to make the necessary selections to arrive at the presently claimed invention with a reasonable expectation of success. Moreover, as the Examiner knows, obviousness requires at least some degree of predictability. *See* M.P.E.P. § 2143.02 (8th ed., Rev 1, 2003). Here, it is not possible to predict the color or the resultant properties of the oxidation dye composition.

As disclosed by Terranova, oxidation dyes must "satisfy a certain number of requirements." The dye must "have no toxicological drawbacks, it must be able to give shades of the desired intensity, and it must be able to withstand external agents (light, bad weather, washing, permanent waving, perspiration, rubbing). . . must also be as unselective as possible . . [and] have good chemical stability." (Col. 1, lines 30-45.) The person of ordinary skill in the art is given no direction as to how to choose a second oxidation base for inclusion in Terranova so that all of these "requirements" are met.

Terranova also appears to teach that the selection of the oxidation base has an effect on the resulting properties of the composition, such as color degradation.

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Specifically, Terranova teaches that the color degradation of a composition after shampooing varies depending on the combination of an oxidation base and coupler. This is best exemplified when the oxidation base remains the same, but the coupler varies. For example, Examples 25, 27, 29, and 31 of Terranova each used the disclosed oxidation base, but in combination with different couplers, such as, for example, resorcinol and 2-methyl-5-aminophenol. Each of these compositions had a different value of color degradation. (See Table on page 41.) In fact, none of the compositions in Examples 25-32 exhibited the same color degradation after shampooing. These data teach that the resulting properties, such as color degradation, of a particular composition comprising a combination of an oxidation base and a coupler are unpredictable. That is, some combinations have better results than others.

In Applicant's view, these examples would lead one of ordinary skill in the art to believe that the selection of an oxidation base(s) and/or coupler(s) for a dyeing composition would not only affect the color shade, but would also affect the resulting properties, such as color degradation, of the hair dyes. The data do not demonstrate whether the effect would be for the better or for the worse. In fact, the data do not demonstrate any predictability as to which oxidation base(s) and/or coupler(s) has better or worse effects. Because one of ordinary skill in the art would not be able, based on Terranova's disclosure, to predict or expect whether the inclusion of an additional oxidation base and/or coupler in the composition of Terranova would lead to improved properties (e.g., improved color degradation), the selection of the claimed at least one second oxidation base and at least one coupler falling within the scope of Applicant's claims would not have been obvious.

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B. Declaration Under 37 C.F.R. § 1.132 of Inventor Audousset

In support of Applicant's position, filed concurrently herewith is a Declaration Under 37 C.F.R. § 1.132 executed by the inventor, Marie-Pascale AUDOUSSET. The Declaration states that four oxidation dye compositions were formulated, applied to hair, and tested for color degradation. Composition 1, made according to the present invention, comprised 3,7 diaminopyrazolo pyrimidine 2HCL as a first oxidation base; N,N-bis-(β-hydroxyethyl)para-phenylenediamine sulfate as a second oxidation base; and the coupler 1-methyl-2-hydroxy-4-β-hydroxyethylamino benzene. Composition 2, not of the present invention, comprised 3,7 diaminopyrazolo pyrimidine 2HCL as the only oxidation base and 1-methyl-2-hydroxy-4-β-hydroxyethylamino benzene as the coupler. Composition 3, of the present invention, comprised 3,7 diaminopyrazolo pyrimidine 2HCL as the first oxidation base; N,N-bis-(β-hydroxyethyl)para-phenylenediamine sulfate as the second oxidation base; and the coupler 1-β-hydroxyethyl oxy 2,4-diaminobenzene 2HCL. Composition 4, not of the present invention, comprised 3,7 diaminopyrazolo pyrimidine 2HCL as the only oxidation base; and 1-β-hydroxyethyl oxy 2,4-diaminobenzene 2HCL as the coupler. After the compositions were applied to hair, the color of the locks before and after exposure to light and water was recorded.

The results indicated that the locks dyed with the compositions of the claimed invention had less of a difference in color before and after the resistance treatment, i.e., they had a smaller ΔE, as compared to the locks dyed with the compositions not of the claimed invention. The inventive compositions exhibited less color degradation as compared to compositions wherein the presently claimed second oxidation base was

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not present. The data are consistent with the data of Terranova and support Applicant's position that the resulting properties, such as color degradation, of a particular composition are unpredictable, unexpected, and therefore not obvious.

C. Rejection over Terranova in view of Brody

In addition to relying on Terranova alone, the Examiner has relied on Brody as a secondary reference for teaching that "N,N(bis-hydroxyethyl)-p-phenylenediamine was developed as a replacement for [para-phenylenediamine and para-toluenediamine]." (Office Action dated October 25, 2002, at 6.) Based on this teaching, the Examiner has argued that it would have been obvious to choose N,N(bis-hydroxyethyl)-p-phenylene-diamine as the additional oxidation base for use in Terranova's compositions because of the advantages it provides over other conventional para oxidation bases. (*Id.*)

At its broadest interpretation, Brody teaches that the combination of an oxidation base falling within the scope of his "para component" and any oxidation base listed in column 4, lines 34-38, would produce a successful hair dye composition. However, this broad interpretation is not supported by the data presented. At most, looking at Example 15 of Brody, one could argue that a combination of N,N-bis-(ß-hydroxyethyl)-3-methyl-p-phenylenediamine and p-phenylenediamine produced a stable oxidative hair dye composition. Brody, however, does not provide any data establishing that the combination in Example 15 did not exhibit the disadvantages disclosed at column 1, lines 48-63, and associated with the use of p-phenylenediamine. Therefore, one of ordinary skill in the art is left to wonder whether the combination actually overcame the disadvantages and would therefore merit actually partially substituting the claimed first

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oxidation base with the claimed N,N-bis-(ß-hydroxyethyl)-p-phenylenediamine, which, Applicant notes, is not the same compound used in Example 15.

Moreover, the Examiner has failed to establish the teaching or suggestion in Brody for combining his disclosed "para components" with a pyrazolo(1,5-a)pyrimidine derivative, such as the presently claimed first oxidation base. As discussed above, Brody teaches that his "para component" may be combined with any oxidation base listed in column 4, lines 34-38, but this disclosure does not include pyrazolo(1,5-a)pyrimidines. For the same reasons as discussed above, one of ordinary skill in the art would have had no basis for thinking that the combination of a pyrazolo(1,5-a)pyrimidine, such as the presently claimed first oxidation base, and the presently claimed N,N-bis-(ß-hydroxyethyl)-p-phenylenediamine would overcome the disadvantages disclosed by Brody.

For at least the foregoing reasons, the Examiner has failed to establish a *prima facie* case of obviousness. Applicant respectfully requests reconsideration and withdrawal of the rejection.

IV. CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests the reconsideration of this application and the timely allowance of the pending claims.

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Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: November 10, 2003

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